

**For Teachers:** Please have the students read the sentences one at a time and correct their pronunciation of each sentence then have them repeat after you. Wait until after they read the sentence (use the number in place of the missing word) to have the students choose the correct answer to fill in the blank. When the students finish the article, move on to the further questions.

日本語訳なしタイプ B もございます。スクロールダウンするとございますので好きな方をご利用下さい。

**2[B]** – Second-guessing *Mother Nature*

母 (はは) なる自然 (しぜん)



Version3 G11-3

1. Some scientists are arguing for the broad 実行 (じっこう) implementation of a 方策 (ほうさく) tactic called “assisted 移住 (いじゅう) migration”—the act of 新 (あたらしい) 場所 (ばしょ) に移 (うつ) すこと relocating plants and animal species to protect them from climate change.
2. Assisted migration may help ( **29** ) of “evolutionary lag.” 進化的 (しんかてき) な
3. Normally, an 生態系 (せいたいけい) ecosystem requires this time to adapt to environmental changes.
4. Given the 急速 (きゅうそく) rapidity of recent climate shifts, however, if species are unable to adapt quickly enough, they could disappear altogether.
5. The scientists hope that assisted migration can help avoid this 惨事 (さんじ) calamity.  
**\*Choose the correct answer to fill in the blank from these choices.**
6. **(29)**      1 hasten the start                      2 reverse the course  
せかす
7.              3 reveal the cause                      4 bypass the process  
漏 (も) らす

**Further Questions** \*Ask student to answer the question on their own at first. If the student can't answer correctly, have him look at the last page and read the “example answer” for the question. Have the student try to memorize the answer, if it's too long or difficult, you should divide the sentence into 2 or 3 parts to make it easier to remember. Once they have memorized the answer, the teacher should ask the question one last time so that the student can practice answering. Also if you find any mistakes, please mark the page and let me know ASAP.

9. **1) What is assisted migration?**
10. “assisted migration”とは何なんですか。  
*Assisted migration is the act of relocating plants and animal species to protect them from climate change.*
11. **2) What is meant by “evolutionary lag”?**
12. ここで“evolutionary lag”というのいみはどのような意味ですか。  
*Normally, an ecosystem requires time to adapt to environmental changes.*
13. **3) What calamity do scientists hope that assisted migration can help avoid?**
14. 科学者かがくしゃたちが、assisted migration によって避さけることができると期待きたいしている惨事さんじとはどんなものですか。  
*The calamity is the disappearance of species altogether.*

15. An early project involved *Torreya taxifolia*, a 針葉樹 (しんようじゅ) conifer only found in a tiny region in Florida.
16. Fearing global warming would wipe out the species, volunteers and 植物学者 (しよくぶつがくしゃ) botanists replanted dozens of the trees far to the north in the state of North Carolina, where the climate is now thought to be more 快適 (かいてき) な hospitable to the fragile plants.

17. Interestingly, the greatest supporter of the practice in North America has been the timber industry.  
針葉樹 (しんようじゅ) の
18. Coniferous forests ( 30 ) rising temperatures.
19. Recent mild winters have allowed the pine beetle to spread across the American and Canadian West; the 幼虫 (ようちゅう) larvae of these beetles ~を餌 (えさ) とする feed on the trees destroying millions of acres of forest.
20. Drought has also 干 (かん) ばつ taken a toll 大打撃 (だいだげき) を与 (あた) えた on wooded areas throughout North America.
21. In British Columbia, which relies heavily on its timber and paper industries, the government has decided to 取 (と) りかかる undertake the largest assisted migration project to date, moving a million カラマツ 苗木 (なえぎ) larch seedlings up to 200 miles northwest of their native range.

\*Choose the correct answer to fill in the blank from these choices.

22. (30) 1 have been affected by 2 can grow quickly in  
~に耐 (た) えて
23. 3 are resistant to 4 are a way to combat

### Further Questions



24. 4) To where did the volunteers and botanists replant the *Torreya taxifolia* trees?  
ボランティアと植物学者 (しょくぶつがくしゃ) たちは、どこに Torreya taxifolia の木 (き) を移植 (いしょく) しましたか。  
*They replanted dozens of the trees far to the north in the state of North Carolina.*
26. 5) What has happened because of recent mild winters?  
近年 (きんねん) の暖冬 (だんとう) の影響 (えいぎょう) で何が起 (お) きましたか。  
*The pine beetle has spread across the American and Canadian West.*

28. Many 森林保護主義者 (しんりんほごしゅぎしゃ) conservationists ( 31 ) assisted migration.  
保護 (ほご)
29. They point out that, from a conservation standpoint, introducing species into an ecosystem violates the fundamental principle of preserving the natural order of things.
30. It also carries an element of uncertainty.
31. Laurie Wayburn, president of the conservation 支持 (しじ) advocacy group Pacific Forest Trust, says, “The fact is, we do not know how climate change will impact specific areas with precision.”
32. Continued warming, however, may (+ toで) 無理 (むり) に~させる compel 敵 (てき) foes of assisted migration to reconsider the practice.
33. It is not hard to imagine such 操作 (そうさ) manipulation of ecosystems gaining wider 絶滅 (ぜつめつ) acceptance if it proves the only means of preventing species extinction.

\*Choose the correct answer to fill in the blank from these choices.

34. (31) 1 reject criticism of 2 take a 懐疑的 (かいぎてき) な skeptical attitude toward
35. 3 propose a unique way to use 4 have a reputation for supporting

## Further Questions

36. **6) What fundamental principle is violated by assisted migration?**

37. assisted migration によって やぶ きほんげんり 破られる基本原理とはなんですか。

*The principle of preserving the natural order of things is violated.*

38. **7) Why might foes of assisted migration reconsider the practice?**

39. assisted migration はんたいしや の反対者が assisted migration じっこう さいこう の実行を再考するだろうと思われるのはなぜですか。

*It may prove the only means of preventing species extinction.*

40. **8) Are you in favor of assisted migration?**

41. あなたは assisted migration さんせい に賛成しますか。

*ex.) No, I am not. I think it will hurt the new environment the plants are introduced into more than help.*

## Answers for “Further Questions”

42. **1) What is assisted migration?**

*Assisted migration is the act of relocating plants and animal species to protect them from climate change.*

43. **2) What is meant by “evolutionary lag”?**

*Normally, an ecosystem requires time to adapt to environmental changes.*

44. **3) What calamity do scientists hope that assisted migration can help avoid?**

*The calamity is the disappearance of species altogether.*

45. **4) To where did the volunteers and botanists replant the *Torreya taxifolia* trees?**

*They replanted dozens of the trees far to the north in the state of North Carolina.*

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*The pine beetle has spread across the American and Canadian West.*

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*The principle of preserving the natural order of things is violated.*

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*No, I am not. I think it will hurt the new environment the plants are introduced into more than help.*

解答: (29) 4 (30) 1 (31) 2

日本語訳なし

**2[B]** – Second-guessing Mother Nature



Version3 G11-3

50. Some scientists are arguing for the broad implementation of a tactic called “assisted migration”—the act of relocating plants and animal species to protect them from climate change.

51. Assisted migration may help ( **29** ) of “evolutionary lag.”

52. Normally, an ecosystem requires this time to adapt to environmental changes.

53. Given the rapidity of recent climate shifts, however, if species are unable to adapt quickly enough, they could disappear altogether.

54. The scientists hope that assisted migration can help avoid this calamity.



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### Further Questions

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60. An early project involved *Torreya taxifolia*, a conifer only found in a tiny region in Florida.  
61. Fearing global warming would wipe out the species, volunteers and botanists replanted dozens of the trees far to the north in the state of North Carolina, where the climate is now thought to be more hospitable to the fragile plants.  
62. Interestingly, the greatest supporter of the practice in North America has been the timber industry.  
63. Coniferous forests ( 30 ) rising temperatures.  
64. Recent mild winters have allowed the pine beetle to spread across the American and Canadian West; the larvae of these beetles feed on the trees destroying millions of acres of forest.  
65. Drought has also taken a toll on wooded areas throughout North America.  
66. In British Columbia, which relies heavily on its timber and paper industries, the government has decided to undertake the largest assisted migration project to date, moving a million larch seedlings up to 200 miles northwest of their native range.

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76. It is not hard to imagine such manipulation of ecosystems gaining wider acceptance if it proves the only means of preventing species extinction.

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89. 8) Are you in favor of assisted migration?  
*No, I am not. I think it will hurt the new environment the plants are introduced into more than help.*

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